

# Mobile Parts Hospital (MPH)

Ashley John

**O**n a late September evening, a distressed Soldier entered the MPH, a rapid manufacturing system (RMS) located at Camp Arifjan, Kuwait, frantic for guidance in getting parts made to retrofit his Humvee. The Soldier faced a looming mission that was to take place early the next morning. Having a design in mind, he approached the team with a plan for a modified gun mount to attach a Squad Automatic Weapon (SAW) to his vehicle. Getting precision parts quickly was essential to the Soldier completing his mission. However, when the Soldier came in to the module, the MPH team was closing down operations for the day. But, realizing the importance and significance of the mission, the module stayed open late to meet the Soldier's need.



An LMM is put in place by a Rough Terrain Container Handler. (U.S. Army photo by Randy Talbot, TACOM Historian.)

# ) — the 'Parts Doctor' Is In

Racing against the clock, the U.S. Army Tank Automotive Research, Development and Engineering Center's (TARDEC's) MPH team successfully designed, manufactured and delivered the needed parts in about 5 hours. The Soldier installed them early the next morning. Later, while executing his mission, the Soldier and his crew ran into an insurgent ambush. According to

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witnesses, the MPH gun mount enabled the Soldiers to deter and repel enemy attacks safely, allowing for maximum firepower and a successfully completed mission. After hearing witness accounts, the MPH crew realized the direct impact they had on helping Soldiers in need.

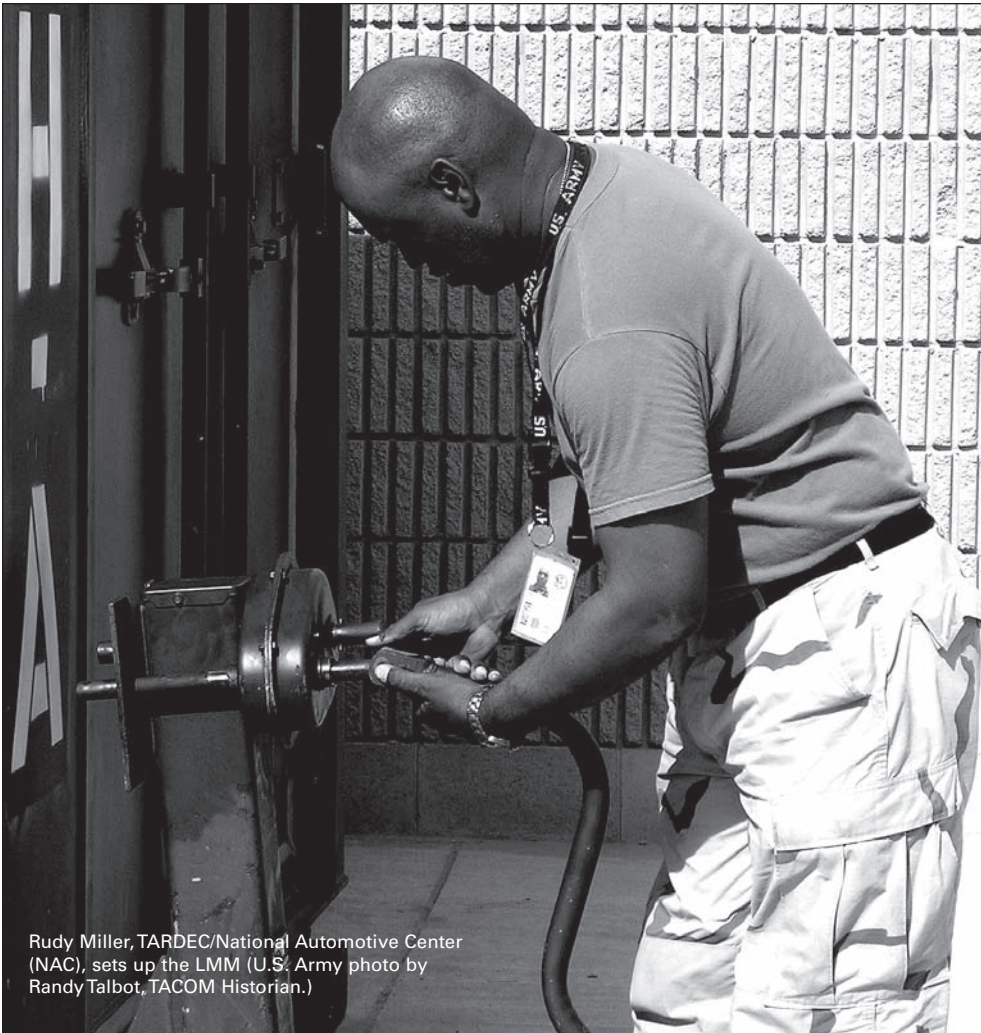
Since its October 2003 arrival at Camp Arifjan, the MPH has serviced

hundreds of Soldiers and has worked vigorously to meet identified maintenance needs for the logistics community and the warfighters they support. As tactical units move into Iraq, MPH is there to rapidly service and repair parts when timing is essential. Recently, to help tackle additional part requests, another MPH unit has been deployed to Camp Anaconda, Iraq, and since June 2005, MPH has had modules located at Bagram Air Force Base, Afghanistan.

Thousands of grateful Soldier testimonials have been sent to the MPH team,

In the early morning of Jan. 15, 2005, a Soldier from B Co., 103rd Armored Battalion, Task Force Dragoon, 28th Infantry Division, watches for any suspicious activity on the streets of As Siniyah, Iraq, as his fellow Soldiers perform a sweep for any vehicle-borne improvised explosive devices. (U.S. Army photo by SPC Elizabeth Erste, 55th Signal Co. (Combat Camera).)





Rudy Miller, TARDEC/National Automotive Center (NAC), sets up the LMM (U.S. Army photo by Randy Talbot, TACOM Historian.)

A revolutionary idea by TARDEC engineers and supported by the Focus: HOPE staff, MPH consists of three individual modules that can efficiently fabricate standard and customized parts for vehicles or systems with critical battlefield needs.

- The RMS — the first module — is a C-130 transportable, mobile manufacturing center composed of two International Organization for Standardization (ISO) containers: the Lathe Manufacturing Module (LMM) and the Rapid Manufacturing Module. Together, they house the most modern design and manufacturing technology supplied to Soldiers.
- The Communications and Control Center (C3) is the second MPH component. This station is where all the memory is stored and acts as the system's brain. C3 stores and sustains the wind-chill database, which houses all technical data for part production, along with the technical expertise to maintain the MPH program through use of satellite communication — linking it to databases, maintainers, engineers and Soldiers anywhere in the world.

headquartered at TARDEC in Warren, MI. Commenting on the team's speed and effectiveness of their work, 2LT Bruce Neighbor, 1486th Transportation Co. in Iraq, said that MPH is, "a necessity in a theater of war." Neighbor, a frequent MPH user, continues to spread the word about what a fabulous job the team is doing. "Simply put," he said, "the MPH has saved

lives. I continue to bring more and more orders to the MPH, and they have fulfilled my every need."

TARDEC is now working with Product Manager Sets, Kits, Outfits and Tools, located at Rock Island Arsenal, IL, to transition the MPH program. TARDEC has also partnered with a local Detroit nonprofit training and manufacturing school — Focus: HOPE — to help train Ground Systems Industrial Enterprise personnel and Soldiers to operate the RMS modules that will be stationed in Afghanistan.

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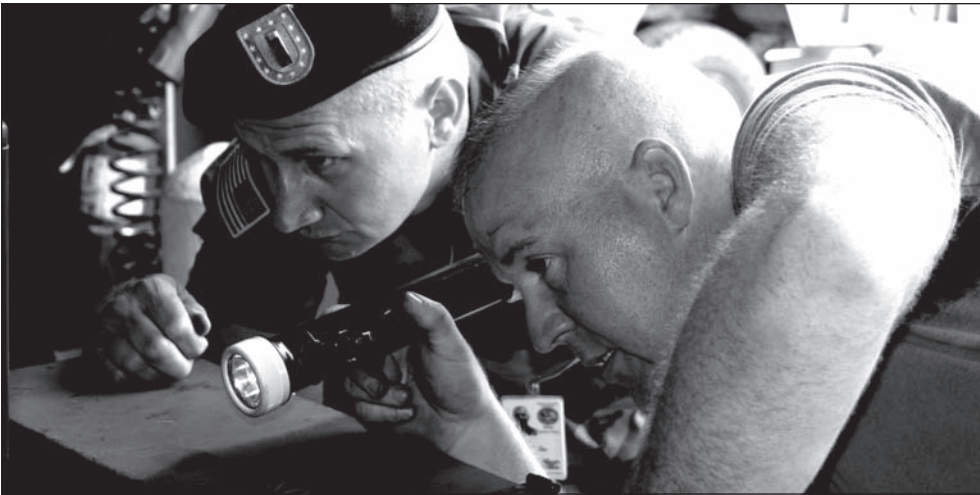
- The Agile Manufacturing Cell — the MPH's final module — is currently located at Focus: HOPE. This fixed facility includes a multiple manufacturing system, reverse engineering and finishing capabilities. The unit increases the MPH's manufacturing capacity by producing specific parts that the RMS unit cannot

fabricate in-country because of size, weight or environmental restraints.



Kevin Green, Focus: HOPE Senior Machinist, hands a pintle adapter to CPT Ronnie Anderson, Commander, 514th Maintenance Co. (U.S. Army photo by Joe Shenosky.)





The MPH has provided critical replacement parts for Humvees, M2 Bradleys, M88 recovery vehicles and generators. The MPH C3 houses all the technical data for LMM part production. (U.S. Army photo by PFC Seth Laughter, 35th Signal Brigade (Airborne).)

This cell produces the larger production quantities of parts, therefore increasing production readiness of the deployed LMMs. This virtual factory has real-time access to CONUS-based military and industrial manufacturing capacity.

Nearly 13,000 parts have been produced since MPH's deployment into theater. Of these, the SAW vehicle

mount was awarded one of the Top 10 Greatest Inventions of 2003 by the U.S. Army Materiel Command.

Today, the MPH continues its Soldier support missions. According to a recent letter received from Kevin Green, an RMS manufacturing technician based at Camp Arifjan, "SGT McMillian from the 1st Infantry Division artillery came into the RMS to speak

about the adapter sleeves and mounts for the unit's Humvee gun truck that our team had made for them. On a recent mission, McMillian and his comrades survived a rocket-propelled grenade attack on their convoy. He believed that these items were instrumental in saving American lives."

Humvees are not the only military vehicle systems tended to by MPH. The MPH has also aided M88 recovery vehicles, M2 Bradleys and Heavy Expanded Mobility Tactical Truck vehicle systems and their components. Soldiers continue to display high demand for the parts included in the M249 SAW universal weapons mount and Blue Force Tracking systems.

With deployments to Kuwait, Iraq and Afghanistan, MPH has a direct impact on *Operation Iraqi Freedom* and the ongoing global war on terrorism. Point blank, the system is saving the lives of American Soldiers daily. As CPT Amy Ebitz, 2nd Military Police Battalion stated, "My company now will be going forward into danger better protected because of MPH." She is hearing no argument from TARDEC's MPH team, who continue to manufacture thousands of parts to ensure Soldiers successfully complete their missions.

**ASHLEY JOHN** is a Booz Allen Hamilton contractor working in support of the TARDEC Technology Promotions Team. She holds a B.A. in business marketing from Michigan State University.



SSG Kenneth Kennedy inspects a modified gun mount that the LMM produced, which he installed and welded in place. (U.S. Army photo by Greg Outland.)

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